PILOT GUIDELINES FOR DAG-TM Air-Side CPDLC Operations

During DAG-TM flight scenarios, single-aircraft operator, MACS/CDTI and ACFS/CDTI pilot participants will 'fly' scenarios – en route through the study airspace, or arrivals into DFW. One element that will be present on specific scenarios is CPDLC. On the MACS flight deck, the interface consists of two panels – a DataLink Controls panel, and a DataLink Message panel. (The use of CPDLC hardware on the ACFS flight deck will be covered during hands-on training.)

Figure 1 MACS CPDLC panels – DataLink Controls and Display.

DataLink messages (uplinks from ATC) must be responded to, electronically, within 40 seconds of receipt on the flight deck. The controller receives an alert if more than 40 seconds transpire without a DataLink "ACCEPT" response from the aircraft. In the event the flight deck needs to reject a DataLinked instruction, the "REJECT" button should be activated (see *Rejecting a Datalink*, below).

"**Accept**(ing)" a CPDLC message on a MACS flight deck will map to an appropriate response on the ground-side – for example WILCO or ROGER – based on the type of instruction received from the ground.

"**Load**(ing)" a CPDLC message, if related to route, will update the CDU accordingly, and require an "EXEC(ute)" on the keypad. DAG-TM MACS/CDTI pilots should ensure that the route change accurately reflects on the CDTI.

"**Reject**(ing)" a CPDLC message on a MACS flight deck will also map to an appropriate response on the ground-side – for example UNABLE or NEGATIVE – based on the type of instruction received from the ground (see *Rejecting a Datalink*, below).

When a traditional voice communication is received, for example to change frequency, or execute a specific heading, etc., DAG-TM pilots should respond by voice in the traditional, expected manner, and comply with the ATC instruction/s accordingly. In the case of a frequency change (from one ATC sector to another), you should acknowledge the message from the departing sector, and contact the new sector-controller frequency in the customary manner.

Uplink messages generated by ATC are limited to lateral route changes (for example, a direct-to), speed advisories, and RTA meter fix crossing requirements. ***PDA Spacing instructions will be via voice only.*** Standard altitude restrictions apply at all times.

Upon receipt on the air-side, the flight deck must either accept or reject the message instructions. After "ACCEPT(ing)" a DataLink message, "EXEC(cute)" the modifications in the CDU, or in the case of an RTA, "ACCEPT" the message, set up and execute the RTA on the CDTI, and then "EXEC(ute)" the procedure in the CDU. If the message instructions need to be rejected, click the "REJECT" button and contact ATC (see Note 1, below).

A **Required Time of Arrival (RTA)** is a clearance. The target time is the required meter fix crossing time for the aircraft. Meeting this time at the designated fix facilitates terminal area management of arrivals.

Entering an RTA time in the CDTI is covered in the CDTI User Manual.

Downlink messages generated by the flight deck are limited to route modifications trial-planned using the CDTI. Upon receipt on the ground-side, ATC is required to either accept or reject the route modification. Upon receipt of an uplinked CPDLC "Accept" message on the flight deck, the route modification must be "EXEC(uted)" on the CDU. If ATC rejects the route modification request, they are required to contact the flight deck and address the circumstances. On the flight deck the route modification in the CDTI should be removed by turning the RAT off.

REJECT(ing) a DataLink Instruction: If at any time it is necessary for you to reject a CPDLC transmitted instruction from ATC, click the "REJECT" button and contact ATC as soon as is practical, referencing the DataLink message, and the reason/s for your aircraft's inability to comply. Your message should take the following approximate form:

> "*Center, American 123. Reference DataLink message, am unable to meet crossing restriction at Hyde, please advise.*"